



Lawson, J. 1972
"Statistics of the Mineral Production of the Pennines,
Part Two - Westmorland and the Lake District"
Memoirs, NCMRS, Vol.2 No.2, pp.44-59

Published by the

THE NORTHERN CAVERN & MINE RESEARCH SOCIETY SKIPTON U.K.

© N.C.M.R.S. & The Author(s) 1972.

NB

This publication was originally issued in the 10 by 8 inch format then used by the society. It has now been digitised and reformatted at A5. This has changed the original pagination of articles, which is given in square brackets.

STATISTICS OF MINERAL PRODUCTION OF THE PENNINES Part 2. Westmorland & the Lake District

J. Lawson

The first part of this article appeared in the Northern Cavern and Mine Research Society Memoirs Volume Two, part one and tabulated the production of Barytes, Copper, Lead and Zinc ores from the Central Pennine area between 1848 and 1881.

Part Two covers Westmorland and also includes the Lake District region, which is strictly not part of the Pennines. In addition to the statistics, mineral owners and agents are listed with some further notes on the mines.

The details are taken from 'The Mineral Statistics of Great Britain and Ireland' published annually between 1853 and 1882, and covering the years 1848 to 1881 inclusive. They were compiled by R. Hunt and published by the Geological Survey.

The notes for each table are derived from the published material in the statistics, whereas the general comments are based upon the author's research and information obtained from other publications.

The tables are arranged as follows:-

Table 1. Lead Ore production 1848-1881

Table 2. Zinc Ore production 1872-1881

Table 3. Copper production 1854-1881

Table 4. Barytes production 1868-1878

The material is arranged in two sections. Section One deals with the production statistics and Section Two with the mine owners and agents, with details of the years that the mine was active, if this was not the complete period between 1848 and 1881.

MINERAL PRODUCTION Pt 2. WESTMORLAND & THE LAKE DISTRICT

Table 1. Lead Ore Production 1848-1881

		1848	1849	1850	1851	1852	1853	1854
1	Bannerdale							
2	Barrow							
3	Beld's Mine							
4	Blencathra					4.0		
5	Brandlehow							78.3
6	Brandy Gill							
7	Caldbeck Fells							
8	Caldbeck mine				659.2	541.0		
9	Castle Nook							
10	Croigton							
11	Driggeth	30.75		140.2				252.8
12	Dry Gill	40.85	50.1	2.1				
13	Dufton	246.0	601.6	657.1	591.45	499.0	518.9	281.5
14	Force Crag	43.0	27.3	8.0				
15	Goldscope				14.57	18.5	266.0	365.9
16	Greenside	1560.0	1297.3	2000.3	2000.0	2150.0	1600.0	1600.0
17	Hardshins							
18	Hartley Birkett							
19	Helvellyn							
20	Hilton &	273.0						
21	Murton							
22	Hunter's vein							
23	Kennyside							
24	Keswick Mines	20.0	56.8	175.0	102.5	179.0	86.0	45.0
25	Lodgegill							
26	Longrigg							
27	Low Hartsop							
28	Lunehead					32.0		
29	Mallerstang					02.0		
30	Nether Hearth							
31	North Stainmore							
32	Red Gill							
33	Roughton Gill			89.0			202.3	182.25
34	Saddleback			07.0			202.0	102.20
35	Silverband							
36	Skiddaw					8.0		
37	Thornthwaite					0.0		
38	Threlkeld							
39	Woodend	36.0	32.0					
40	Yewthwaite	50.0	32.0			130.0		35.3
41	Bell's Hill					150.0		33.3
71	Den 3 mm							

1855 1856 1857 1858 1859 1860 1861 1862 1863

1									
2	19.45	7.25							
3	17.43	1.23							
4									
5	162.0	235.65	269.0	306.0		295 25	300.0	282.65	99.0
6	102.0	233.03	207.0	300.0		273.23	300.0	202.03	<i>))</i> .0
7									
8									
9									36.0
10						5.0			30.0
11	208.0	241 7	251.0	269.0	237.5		179.0	211.0	166.3
12	200.0	211.7	231.0	207.0	237.3	237.13	177.0	211.0	100.5
13	142.1	70.75		231.65		167.1	218.1	208.0	144.0
14	1 12.1	70.75			47.0	48.0	88.0		14.9
15	422.0	456.25	351.0	535.0	391.0	415.0	480.0	350.0	250.0
16		1800.0			0,1.0		1800.0	220.0	
17	9.0	25.25		26.25			67.6	144.2	202.7
18	,.0	20.20		20.20		,	07.0		20217
19									
20	146.0	116.4	62.6	55.0		66.6	96.0	121.6	85.0
21									
22									
23	15.55	21.2	36.75						
24	130.0		132.0		183.0	269.0			
25									
26									
27									
28									
29									
30		192.0	211.3	55.7	30.5	8.25	23.3	3.85	
31	18.4	84.0	80.0	21.55	20.75	46.4	41.2	40.0	34.2
32							1.4	15.0	8.8
33	308.55	507.2	436.0	306.0	317.4	376.8	320.35	303.0	437.9
35									
36		130.5	198.35						5.5
37									
38									
39						20.0	35.0	58.0	22.7
40	45.55	18.0							
41									

MINERAL PRODUCTION Pt 2. WESTMORLAND & THE LAKE DISTRICT

	1864	1865	1866	1867	1868	1869	1870	1871	1872
1 2 3									
4 5	50.0	5.0	8.55	i					4.0
6 7 8			216.0	318.25				1560.0	4.0
9 10									
10 11 12	126.6	9.75	150.0	148.0	128.35	18.0	15.0		
13 14	131.2	112.0	68.7	32.75	66.35	42.9	12.3	10.6	14.6
15	150.0	35.5							
16 17 18	181.7	105.0	144.1	32.6	1800.0 16.05	2250.0 8.05		1912.0	20.5
19	75.6	72.0	75.5	52.05	. 71.74	- 00.0	70.1		42.0
20 21	75.6	72.0	75.5	53.05	5 71.75	5 88.8	79.1		80.0
22						4.05	3.65	88.0	
23			20.0						
24 25			20.0					4.1	4.1
26								4.1	4.1
27							3.0		
28									
29					20.4	15 45		24.7	
30 31	25.0				28.4	15.45			
32	23.0		2.8						
33	473.65	367.45		359.7	533.0	476.0	674.0	496.4	830.8
34									
35	80.0	92.0	112.6	100.0	91.0	109.7	108.5	68.1	41.4
36									
37									
38 39									
40		200.0	343.2	350.0	331.5		93.0	104.8	138.1
41		200.0	39.2	330.0	331.3		73.0	104.0	150.1

	1873	1874	1875	1876	1877	1878	1879	1880	1881
1									
2									
3								7.6	
4									
5 6		5.5							
7		302.5	319.2	154.15	5 95.95	5			
8		302.3	317.2	15 1.11	, ,,,,,	,			
9									
10									
11									
12			5.85						
13									
14									
15 16	1360.0	1276 0	1558.0	1759 7	1527 /	1591 0	1527.0	1527.3	1236.5
17	1309.0	7.05		1/36./	1327.4	1361.0	1327.0	1327.3	1230.3
18		7.00	,		15.3	1.9			
19					10.0	1.,			
20		52.4	74.0	64.0					
21				6.0					
22									
23									
24									
25 26					135.0				
27					133.0				
28									
29							36.35	5	
30									
31									
32									
33	413.1	25.2		4.0					
34		26.3	12.04	4.0					
35 36		32.6	13.05)					
37				4.65	5				
38				7.00	,			50.0	195.0
39								2 2.0	-, -, -,
40	86.25	5 1.0				38.8			
41									

Notes on Table 1

- 1. Blencathra mine (4) full title was 'Blencathra & Skiddaw'.
- 2. Dufton mine (13) includes Silverband production from 1848 to 1855, 1858 to 1862, and Hilton and Murton production between 1849 and 1854.
- 3. Helvellyn mine (19) full title was 'Helvellyn (Wythburn)'.
- 4. Hilton and Murton mines (20 &21) figures combined between 1848 and 1881.
- Production from Brandlehow mine in 1857 includes some ore from Yewthwaite mine.
- 6. Production from Goldscope mine in 1863 includes some ore from Yewthwaite.
- 7. Kennyside mine is recorded as being abandoned in 1857.
- 10. Production from Roughten Gill mine in 1867 includes the Caldbeck mines, and in 1871 includes some Driggeth ore.
- Production from Yewthwaite mine in 1870 includes ore from Goldscope and Barrow.

General Comments

The production figures from Goldscope mine are particularly interesting as they confirm Postlethwaite's statement (1913) that the Great Lead Bunch was discovered in 1852, for the production figures dramatically shoot up in the next year. Postlethwaite also states that Goldscope mine was abandoned in 1864 and the obvious discrepancy must be due to either the ore raised in the higher levels or recovered from the dumps. This mine was worked in conjunction with Yewthwaite mine and as will be noticed, this mine ceases production as Goldscope opens out, and vice-versa.

The figures from Greenside mine seem to be very suspect since they are often complete whole numbers and are the same in consecutive years. After 1868 the figures appear to be reliable.

The Caldbeck mine production figures for 1851 and 1852 seem to be the missing figures for Roughten Gill for these two years, although in view of the relatively high figures it would seem probable that the figures from Driggeth are also included.

The Hardshins mine poses a number of problems. In the statistics it is included with the Hilton and Dufton mines and obviously was worked by the London Lead Co. (known as the Governor and Co. in the statistics) in this sett of mines. However in the list of mine localities the mine is said to be situated in Tynehead/Teeside. Dunham (1948) considers that the site was "presumably the western workings on Murton Fell North vein" towards Hilton village. This however would not agree with the description given and it appear to the author that it is more probable that the site is on the eastern end of Murton Fell North vein was the vein heads towards the Teesdale watershed; it could be described as being in Tynehead/Teeside and yet still fall in the workings of the Scordale mines. Dunham's explanation does not fit the description. (Editor's Note: there is also a Hardshins mine at Tynehead, on the Westmorland side of the river).

It would appear from the production figures at Dufton, Silverband, Hilton & Murton mines that these were closed primarily due to exhaustion of the available ore deposits. Dunham considers that this certainly applied to the two former mines and probably also to the latter. Roughten Gill seems to have suffered a similar fate and the production figures bear out Postlethwaite's statement toot the mine closed about 1878. The obvious reason for closure usually postulated by optimistic geologists that the price of lead was the main cause of closure does not bear out in these two roses as the dramatic fall in the price of lead did not take place until 1878 (Willies, 1969).

Table 2. Zinc	Ore Pro	duction. 18	72-1881.		
Mine	1872	1873	1874	1875	1876
Caldbeck	78.0	7.1	12.0		44.2
Force Crag	600.0				
Roughton Gill		23.2	16.0		
Mine	1877	1878	1879	1880	1881
Keswick United	75.0	65.0	24.0		
Threlkeld					206.0

Note: the production from Roughten Gill also includes some ore from Dry Gill mine.

General Comment: the rather high figure from Force Crag mine seems rather suspect.

Table 3. Copper Production 1854-1881

Miı	Mine		1855	1856	1857	1858	1859
1	Caldbeck Fells		3365.0	3659.4			
2	Coniston	3048.0	3365.0	3659.4	3292.5	3416.2	3066.6
3	Driggeth			8.0	7.5	6.15	5.8
4	Force Crag						
5	Greenbourne	140.0	120.0	204.0	187.0	160.0	129.0
6	Haygil1						
7	Red Gill			45.05	5		
8	Roughton Gill				30.0	27.85	8.7
9	Tilberthwaite						

Table 3. Continued										
	1860	1861	1862	1863	1864	1865	1866	1867		
1							19.1	47.85		
2	2506.1	2210.0	2628.2	2261.6	1896.8	1796.1	1169.0	1688.85		
3	19.4	15.5	18.0	5.0						
4										
5	75.0	59.5								
6	3.7									
7							2.8			
8	6.2	14.0	12.0	50.0	25.6	22.2	19.0	30.0		
9										

Table 3. Continued.											
	1868	1869	1870	1871	1872	1873	1874	1875			
1			300.0	177.3	86.8	113.4	142.0	11.5			
2	1377.4	1900.0	1423.0	1423.3	1465.8	1392.4	930.8	1373.35			
3											
4							700.0				
5											
6			10.5								
7	3.0	5.0									
8	127.4	131.1	128.5	271.0	180.0						
9							4.85	5			

Table 3. Continued.

	1876	1877	1878	1879	1880	1881
1	11.5	5.45				
2	1007.05	646.25	144.6	15.65	442.5	514.75
3						
4						
5						
6						
7						
8						
9						

Notes on Table 3.

- 1. The production from Caldbeck Fells in 1872 includes ore from Roughten Gill mine.
- 2. The production from Coniston mine in 1872 includes some ore from Tilberthwaite mine.

General Comments.

Greenbourne was working from 1854 to 1862, a fact not previously recorded.

The figure for Force Crag mine in 1874 is astonishing, and as copper is not very common at this mine a probable explanation is that this is in fact the Barytes production figure for the year, for as will be seen in Table 4 the figure for this year is missing.

Shaw's statement that the Coniston mines were closed for economic reasons rather than a shortage of ore (1970, p.112) seems to be suspect in the light of the above figures, for as will be seen they show a fall in the later years; the figure for 1881 is less than one third of the 1865 figure, and although Shaw's statement is partially true obviously there was a falling off in copper as the mine became deeper, and this would be reflected in the profits that the mine was making.

Table 4 Barytes Production 1868-1878

Mine Force Crag	1868 213	1869 120	1870 442	1871	1872 600	1873 230
Mine Force Crag	1874	1875 700	1876 615	1877 622	1878 353.5	
Caldbeck Fells			11.5			

General Comments

It would appear from the above that Force Crag was opened up in 1868 and worked through to 1878 and thus confirms Shaw's statement that "barytes working dated back to the 1860's but by 1880 was given up as economic rather than shortage of barytes".

SECTION TWO

Details of Owners and Mine Locations in Westmorland

Dufton & Silverband Mine

Located near Durton and owned by the London Lead Co. In 1870 Silverband mine is noted as being suspended and by 1876 no longer appears. In the following year Dufton has also been deleted. For details of Agent see below.

Hardshins Mine

Located in the Tynehead/Teeside area and owned by the London Lead Co. Entries appear from 1859 to 1877. For details of Agent see below.

Hilton & Murton Mine

Located near Hilton and owned by the London Lead Co. Entries appear from 1859 to 1877.

Concerning the Agents for the three above mines, Robert Bainbridge is named as Agent for all three, except in 1862 when W. Wallace is noted as agent. This may be because either Bainbridge was ill in that year, as according to Raistrick (1938) he was frequently so, or Wallace may have been the area agent, and the list compilers had made an error.

Bayle Hill Mine

Located near Kirby Stephen. In 1871 it is recorded as being owned by Henry Pease Co. From 1872 to 1877 it appears under the London lead Co., with Robert Bainbridge as agent.

Bugle Hill Mine

Located near Kirby Stephen and owned by Henry Pease Co. Entries appear from 1864 to 1873.

Beld's Mine

Located in Mallerstang and owned by, J. Kearton & Co. Entries appear for 1879 and 1880.

Eden Valley Mine

Located near Kirby Stephen and owed by the Eden Valley Co. Entries appear in 1876 and 1877.

Hartley Birkett

Located near Kirby Stephen and owned by Henry Pease & Co. with John Cain as manager. Entries appear from 1870 to 1874.

Clouds Mine

Located near Kirby Stephen and owned by Henry Pease & Co, with John Cain as manager and J.E Dodsworth as engineer. Entries appear between 1870 and 1876.

Greenside Mine

This mine, located at Patterdale, had a varied history. The original company is noted as John Jameson Co., with Edward Allinson noted as agent in 1859. Then followed a rapid change of agents. In 1860 John Phillips, in 1863, John Barrow, in 1864 Robt. Daking, in 1877 Thomas Raw and in 1871 Thomas Taylor. In 1870, John Jameson, Wm. Whitewell, & R.B. Smith are noted as directors. In 1873 J. Thompson is also noted as a director. In 1879 the company's name is changed to the Greenside Mining Co.

Neather Hearth Mine

Location is given as Tynehead/Teeside and the owners as the Tynehead Mining; Co. The agent from 1854 to 1860 was William Vipond, in 1860 the owner changes to Mrs Emmerson Co. and after 1862 there is a gap until 1868 when the name is given as the Neather Hearth Mining Co. until the final entry in 1877.

North Staimnore

Located near Brough, the original owners are noted as Jacob Walton and Sir Rd. Tufton. Thomas Walton is noted as agent in 1858. In 1859 the owner is noted as Jacob Walton, Greenends, Alston, and work continues until 1873 when it is suspended. Continues again in 1877 only to close the following year.

General Comment

From the information given, some of the early history of the Greenside mine may be interpreted. It is apparent that up until the appointment of Thomas Raw, the production figures, are untrustworthy. Presumably this is the same person who was associated with the Blakethwaite and A.D. companies in Swaledale.

Presumably by 1870 Jameson needed more capital and took in two partners. The Lucy Tongue level would have just been completed (Shaw). Another partner taken-in in 1873 presumably indicates the need for further capital; it was during this period that the Top Dam burst in a flood and cost the company dearly in compensation. later in 1879, since Jameson was probably no longer the majority shareholder, the name was changed to the Greenside Mining Co. This although not clearly stated in Shaw (1970), the company owning the Greenside Mine went through a number of changes in the period 1859 to 1881.

Details of Owners and Mine Locations in the Lake District

Brandlehow Mine

Located near Keswick and owned by C. Dear & Co. Entries appear from 1859 to 1867 with J. Postlethwaite as manager. In 1872 it reappears with Yewthwaite up to 1877, but evidently it was title holding only, as no work was done.

Barrow Mine

Little was mentioned about this mine during the period under review but it was held with the Yewthwaite title similarly to Brandlehow from 1871 to 1877.

Black Lead Mine

Located near Keswick and owned by the Keswick Black Lead Co. Between 1860 and 1867 the agent is given as John Dixon; no listing is given until 1874 when it is listed as Borrowdale Mine, producing Plumbago, at Seathwaite, Borrowdale. The owner was Barrowdale Plumbago Co., with Wm. Salmon as manager, and J. Wm. Dixon, as agent., In 1879 the mine is no longer listed.

Brandy Gill Mine

Location given as Caldbeck with the owners as, Leicester, Hutchinson & Co. In 1863 M. Hutchinson was agent. In 1871 it is listed as Brandy Gill & Carrock with Robert Hutchinson as agent. The mine does not appear in the 1873 list.

Caldbeck Fells Consols Mine

Location given as Caldbeck, with Capt. Kitto as agent in 1865. In 1866 the mine is joined with the Roughten Gill mine under the Caldbeck Fells Mining Co. Ltd., with W. Francis as agent; this continues until 1870, when Phillip Hawke, R. Trevorthan & J. Lamb as agents. In 1872 this is modified by stating that the former is manager, and the two latter are agents. In 1873 the position is

further complicated for the entry reads; Roughten Gill & Dry Gill & Caldbeck Fells, situation Caldbeck, Caldbeck Fells Mining Co., Walter Garth Secretary, Jas. Polglaze Manager, R. Trevarthan & J. Lamb as agents. In 1874 the mine reverts to its former name of Caldbeck Fells Consols. In 1877 however, the company is noted as being in liquidation.

Coniston Mine

James, Barratt was, manager from 1860 to 1868 for the Coniston Copper Mining Co. In 1868 Wm. Bowden is noted as agent, in 1869 Bennett Johns is noted as Secretary & Ralph P. Goldsworthy as Manager. In 1870 the agent is given as D. Bowden. In 1871 the owners are noted as the Coniston Mining. Co. with Bennett Johns as Purser. Entries continue up to 1873 when the agent is stated as William Bowden. In 1874 he is noted as Manager and Wm. Mitchell as agent. In 1881 Wm. Mitchel is noted as the Manager.

Driggeth Mine

Located near Caldbeck and owned by J. Brocklebank & Co., with W. Jeffrey as Manager, between 1859 and 1863. In 1863 the company is changed to Campbell & Jeffrey, with Jeffrey continuing as Manager. In 1872 the mine name is changed to West Cumberland or Driggeth, located near Hesket Newmarket, owned by the West Cumberland Mining Co. Ltd., with W.B. Jeffrey as agent. In 1874 Jas. Gledhill is noted as Secretary. The last entry, is in 1877.

Dry Gill Mine

This mine's usually listed (when it was) with Roughten Gill. Entries appear for 1863-1867: in 1866, with Roughten Gill, it is noted as part of Caldbeck Fells. In 1868 it is listed separately but under the Caldbeck Co. last mentioned in 1877.

Carrock End Mine

The only mention of this mine is in 1863 when it is listed with the Roughten Gill Mining Co.

Force Crag (or Craig) Mine

Location given as near Keswick, under J. Walton & Co., with Jacob Walton as agent, between 1859 and 1867. In 1867 the company name changes to Straughton & Co., with J.P. Walton as Manager. This continues until 1872 when John Muse is Manager. In 1876 the company is called the Force Crag Mining Co., J. Straughton, and continues until 1880 when it is in liquidation, the company now being called Force Crag Lead & Barytes Mining Co., John Fearon, with John Muse as manager.

Goldscope Mine

Between 1859 and 1871 the owners are given as the Exors. of J. Clarke. In 1871 the Yewthwaite and Barrow mines are added to the title, and in 1872 the company is changed to Hy. King and Spark & Co., With Thos Davidson as agent. The last entry is for 1877.

Helvellyn or Wythburn Mine

Originally given as under the Withburn Mining Co., with J. Muse as agent. In 1872 the company is the Helvellyn Mining Co. with Wm. Wheelhouse as agent. In 1874 the name is changed to the West Cumberland Consols owned by the West Cumberland Consolidated Mining Co. With Ed. Gledhill as agent. In 1876 John Hall is agent. In 1877 the mine name is Helvellyn owned by the West Cumberland Consols Ltd. with Wm. Wheelhouse as Secretary. No entries appear for 1878 and 1879 but in 1880 it reappears as Helvellyn mine owned by West Cumberland Consols Ltd., with John Hall as agent. No entry appears for 1881.

Greenbourne or Coniston Great Mine

The first entry for this mine is in 1865 when John Crosfield as agent, but the listing has disappeared by 1867. The next entry is 1873 when the location is given as Langdale, instead of Ambleside as previously, and the company the Greenbourne Copper Mining Co., with Isaac Williams as Manager. In 1875 Macgowan and Cooper are the company, and entries continue until 1881.

Huel Henry Mine

This mine appears in 1865 only, with the location given as Helvellyn with J. Barrett as agent. It may be the Helvellyn Mine.

Ladstock, Rachel Wood, Thornthwaite & Beckstones Mines

Appear from 1872 to 1881 under the Keswick United Silver Lead Mines Co. Ltd., with Wm Francis as agent.

Mid-Cumberland Mine

Listed between 1871 and 1878 under the Mid Cumberland Mining Co. with J. Irving as Secretary and W.J. Vercoe as manager. No indication is given to this location of this lead mine.

Potsgill Mine

Owned by the East Cumberland Co. with W. Vercoe as manager and listed between 1868 and 1879, as a lead and copper mine.

Red Gill Mine

Listed between 1863 and 1873 under the Red Gill Mining Co. with W. Francis as agent.

Roughten Gill Mine

Between 1859 and 1862 under J. Dixon & Co., with S. Merryweather as Manager. In 1863 the sett comprises Roughten Gill, Silver Gill, Dry Gill and Carrock End with J.R. Justin as agent. In 1866 it is joined With Caldbeck (which see).

Silver Gill Mine

Noted as being part of the Roughten Gill mine, above.

Threlkeld Mine

Listed under the Threlkeld Mining Co. Ltd. between 1880 and 1881.

Tilberthwaite Mine

Owned by the Coniston Mining Co. with William Bowden as agent in 1873. Entries continue up to 1878, with managerial changes as Coniston Mine (which see).

Wood End Mine

Between 1863 and 1872 the mine is owned by J. Walton & Co. with P. Walton as agent. In 1872 the name changes to Saddleback Mining Co. with John F. Nevin as agent. In 1876 the mine name becomes Saddleback, this is the last entry.

Yewthwaite Mine

Listed in 1848 as owned by J.P. Walton & Co. with John P. Walton as manager. In 1849 the owner changes to Exors. of A.R. Clarke with B. Plummer as manager. In 1871 the title is combined with Barrow and Goldscope, and in 1872 the owner becomes Hy. King and Spark with Thos. Davidson as manager. The last entry is for 1877.

General Comments

The takeover of the Roughten Gill mines by the Caldbeck Fells Mining Co. is very confusing for according to the production statistics this took place in 1868 but in the table of owners the change is in 1866. The figures may indicate that the production was split between the two in 1866 and 1867. Which mine constituted the original Caldbeck Fells Consols Mine of 1865 is difficult to decide.

The 'Cornish influence' may be seen in the use of the word Consols in mine company titles.

References

Dunham K.C. 1948, The Northern Pennine Orefield, Volume 1, Mem. Geol. Surv. HMSO.

MINERAL PRODUCTION Pt 2. WESTMORLAND & THE LAKE DISTRICT

Postlethwaite J. 1913, Mines & Mining in the English Lake District.

Raistrick A. 1938, Two Centuries or Industrial Welfare; the London (Quaker) Lead Co. 1692-1905.

Shaw W.T. 1970, Mining in the Lake District. Dalesman Co.

Willies L. 1969, A Note on the Price of Lead 1730-1900. Bull. PDMHS 4,2. pps.179-191.

MSS Received 9th February 1972

J. Lawson, 11 Hillside Drive, Wallbridge Park, LEEK, Staffs